

THE PRAIRIE ASTRONOMER

The Official Newsletter Of The Prairie Astronomy Club, Inc.

May 2004

Volume 45 Issue #5

Internet Addresses

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 NSP E-Mail: nsp@4w.com
 OAS Web Page: www.OmahaAstro.com
 Hyde Observatory www.hydeobservatory.info
 NEB-STAR www.neb-star.org

PROGRAM

May program: To be announced

Note: changes in email addresses:

The PAC Email address is now info@prairieastronomyclub.org instead of pac@4w.com.

The PAC-LIST address has also been changed.

PAC-LIST: You may subscribe to the PAC listserv by sending an e-mail message to: imailsrv@prairieastronomyclub.org. In the body of the message, write "Subscribe PAC-List your-email-address@your-domain.com"

For example:

Subscribe pac-list stargazer@myISP.com

To post messages to the list, send to the address pac-list@prairieastronomyclub.org

CLUB EVENTS

PAC Meeting 7:30pm
Tuesday, May 25, 2004

Mahoney Star Party
Friday, June 11, 2004

Club Star Party
Friday, June 18, 2004

PAC Meeting 7:30pm
Tuesday, June 29, 2004

Mahoney Star Party
Friday, July 09, 2004

Nebraska Star Party
Sunday, July 18, 2004

READ THIS NEWSLETTER ONLINE

Those who wish to help with publishing and postage costs by receiving only the on-line version of the newsletter should contact Liz Bergstrom at 464-2038. Mark Dahmke or Liz can give you the logon account and password for access. You may receive both the mailed version and the on-line version if you wish. A printable PDF version of this newsletter is also available through the website.

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The Prairie Astronomer is published monthly by the Prairie Astronomy Club, Inc. Membership expiration date is listed on the mailing label. Membership dues are: **Regular \$20/yr, Family \$22/yr.** Address all new memberships and renewals to: **The Prairie Astronomy Club, Inc., PO Box 5585, Lincoln, NE 68505-0585.** For other club information, please contact one of the club officers listed on the last page of this newsletter. Newsletter comments and articles should be submitted to: **Mark Dahmke, PO Box 80266, Lincoln, NE 68501 or mdahmke@4w.com, no less than ten days prior to the club meeting.** The Prairie Astronomy Club meets the last Tuesday of each month at Hyde Memorial Observatory in Lincoln, NE.

Secretary's Report

Minutes for the April 27, 2004 Meeting

President Dave Knisely called the meeting to order. Three people new. New Member John Wood, his friend, Charle Huber, and one other.

At the last star party at Olive Creek, we had nice attendance, including Peter Wise from England, with the new SNARL telescope. Also there were several Boy Scouts who'd heard about us from the new member John Wood.

If you'd like to do some observing, put a note on the PAC-list and you just might find some company.

Astronomy Day and the evening before was a great success. On Saturday, April 17, there were 5 or 6 telescopes on the lawn, with Brain Sivill providing the *Learn your telescope* seminar inside. In all, the attendance was around 175 patrons. Jack's report on Astronomy Day at Mueller Planetarium followed tonight's meeting.

The next PAC Star Parties are scheduled for May 14th & 21st at Olive Creek. Due to the conflict with the Mahoney Star Party on May 14th, it was recommended that the 14th be changed.

The next PAC meeting will be Tuesday May 25th at Hyde.

The next NSP planning meeting will be Thursday May 13th at Mahoney State Park.

NSP 11 will be July 17-23, 2004 at Merritt Reservoir. For a brochure on NSP 11, check out the PDF file on the NSP website: www.nebraskastarparty.org.

Jeff Campbell, PAC outreach coordinator, has several events this month. 4-H camps in June and July, one at Pioneer's Park Nature Center May 7th and one at Louisville State Park. For details, contact Jeff Campbell.

The Astronomical League has several award programs for observing, including the well-known Messier Club, as well as others which several of our members are actively pursuing. If you have recently completed any projects, or would like to get started, contact club observing chair, Jeff King.

New Comet Bradfield rises shortly before dawn for the next week or so, look for it in the Northeast just before sunrise.

Club Program Chair, Jack Dunn is looking for new ideas for programs. If you've done something recently you'd like to talk about contact Jack.

The next Mahoney Star Party dates are:

May 14, June 11, July 9, August 13 and September 17

Hyde News: If you're interested in volunteering at Hyde, contact Hyde Volunteer Coordinator, Dave Churilla. For the next few weeks, while the mirror for the 8-inch is being re-coated, for this reason, the club's 13.1-inch dob is on loan to Hyde Observatory and unavailable for check out. The club 100mm refractor is currently checked out to John Wood. Contact Dave Brokofsky to get in line to check out either of these telescopes.

Treasurer's report: All accounts are in order, there is one copy of Ottwell's Astronomical Calendar to be picked up. Finally, Sky Publishing Corp. has announced a new publication: Night Sky, a Bi-monthly for beginning astronomers who might be intimidated by the venerable Sky & Telescope. The first issue is scheduled for May. Liz is looking into club discounts on subscriptions.

Motion to adjourn, seconded. Adjourn to Jack's presentation on Astronomy Day at Mueller.

Respectfully submitted by:

Lee Taylor

Hyde Observatory Volunteer Schedule

| Date | Team Leader | Operators | | Supervisor | Events |
|--|---------------|----------------|----------------|----------------|--------|
| May | | | | | |
| 5/15/04 | Bob Leavitt | Karla Bachman | Erica Block | Jack Dunn | |
| 5/22/04 | Dave Churilla | Erica Block | Joey Churilla | Rick Johnson | |
| 5/29/04 | Brian Sivill | Cece Hedrick | Bob Kacvinsky | Jack Dunn | |
| June | | | | | |
| 6/5/04 | Bill Wells | Steve Lloyd | Josh Machacek | | |
| 6/12/04 | Dave Hamilton | Jeff Campbell | Erica Block | | |
| 6/19/04 | Bob Leavitt | Josh Machecek | Joey Churilla | Dave Churilla | |
| 6/26/04 | Jeff King | OPEN | Josh Machecek | Martin Gaskell | |
| July | | | | | |
| 7/3/04 | Brian Sivill | Jeff Campbell | Dave Brokofsky | | |
| 7/10/04 | Bob Leavitt | Josh Machecek | Erica Block | | |
| 7/17/04 | Bill Wells | Erica Block | Josh Machecek | Martin Gaskell | |
| 7/24/04 | Dave Churilla | Joey Churilla | Steve Lloyd | Martin Gaskell | |
| 7/31/04 | Jeff King | Dave Brokofsky | Bob Kacvinski | | |
| Summer Hours: April through September (Sundown to 11:00 PM) | | | | | |
| Winter Hours: October through March (7:00 PM to 10:00 PM) | | | | | |

Porrima at periastron!– by Martin Gaskell

Tonight had all the promise of being one of those nights of superb sub-arcsecond seeing that we can often get in May and June. I set up "Dowp", the Gaskell family's homemade 8.5-inch, and was not disappointed. First, around midnight I saw a tiny, jet-black satellite transit across Jupiter. The shadow was almost unbelievably black, crisp and sharp. But the real reason I had set up Dowp was to tackle Gamma Virginis (A.K.A. "Porrima").

Back in the mid 1990s I wrote a series of articles for The Prairie Astronomer on double stars to follow. The third of these (<http://www.prairieastronomyclub.org/dblstar3.htm>) discussed Gamma Virginis. I wrote the article when I was using "Tel'Poke", the 6-inch homemade older brother of Dowp. I described Gamma Virginis as "good for small telescopes". Well, that statement is certainly not true this year! 2004-2005 is periastron for Porrima. I ended my discussion of Porrima in the newsletter 9 years ago by say "come the spring of 2000 . . . I am going to need to have built a slightly larger telescope!" I actually had Dowp finished before 2000, and it turned out to be able to measure Porrima as recently as last spring (2003).

Tonight, despite the good seeing, Porrima was unresolved at 600x in Dowp. However, the Airy disk was clearly elongated. I measured the Position Angle (or PA = the angle from the brighter star to the fainter measured counter-clockwise from North) as 210 degrees. When I wrote the 1995 Prairie Astronomy article the PA was 277, so the angle has changed by about 70 degrees. This year and next the change in PA will be dramatic. It will drop to less than 140 degrees over the next 12 months, a swing equal to the change over the whole of the last decade.

I've been measuring Porrima for a dozen years now and it was exciting tonight to see it finally as just an elongated blob. I felt the same excitement that astronomers must have felt in the mid 1830s when Porrima closed up on schedule, the first star to be so observed. I wondered how my view compared with the one Wilhelm Struve had had with the great Dorpat refractor in 1836.

Virgo is going to be visible for almost two months still in the evening sky. If you have a telescope of 8-inches aperture or more, go and take a look at Porrima at your highest power to see if you can see the elongation of the Airy disk. Make a drawing in your sketch book of what it looks like and then do the same next year. Keep looking at Porrima for the following few years as the stars pull apart. It's one of those once-in-a-lifetime experiences that you will treasure. In future years it will be something to tell your children and grandchildren.

May 14th Star Party Report– by Dave and Joey Churilla

Well, I won't go into great detail about last night's Star Party. It would be nice to see more members come out....Joey and I miss seeing and observing with a lot of you, although it's possible some of you went to the Mahoney Star Party.

Joey and I arrived, along with Bob Kacvinsky, around 8 PM. It was cool, but clear. Unfortunately you could tell it was humid by the seeing and by 10:30 PM we were already seeing dew problems. Other club members were John Wood, Bruce Smith, John Lammers, Bill Lohrberg, Josh Machecek, Steve Lloyd, and Lee Taylor.

About 15-17 people showed up last night, including 4 or 5 students who will be competing in the Science Olympiad. They had a real treat and enjoyed their stay (they left around 11:30 PM) with all moaning they didn't really want to go. We also had a couple who had attended the Learn Your Scope Seminar and who I'd invited out, Joe and Kay Roskilly, come out along with a friend named Sue. They both had 2" Bushnell refractors. Hopefully they learned a thing or two, though not likely from me as I'm terrible with equatorial mounts. All in all we ended up with 8 telescopes set up.

The highlight of the evening was comet 2001/Neat Q4. It's just south of the Beehive Cluster (M44) and I could get both in my 2" Wide Scan 3. We had it in binoculars before it was dark enough to see naked eye, and it was impressive in the telescope. Our Mead 14mm Ultra Wide (83x at 82 deg AFOV) couldn't nearly get all the tail in so Joey and I switched to the Wide Scan III. I haven't really figured out what FOV we get with this eyepiece, but we still couldn't get ALL the tail in, although we got a lot of it and it got it's share of "oohs" and "ahhs" :)

We went on to show a number of old favorites; M3, M104 - the Sombrero Galaxy, M44 - the Beehive, M51 - the Whirlpool Galaxy, M57 - the Ring Nebula, Alberio, Jupiter and Saturn. But a second highlight, and one that kept quite a few at the scope for awhile was putting in the Markarian Chain again (a chain of about 13-15 galaxies in Virgo <http://www.ligo.caltech.edu/~aivanov/astro/markarian.html>). Seeing wasn't quite as clear as the last Star Party, but our 14mm Ultra Wide did its usual thing. The beginners and the students were impressed just because of what they were seeing and being able to see so many galaxies in one field, although we need to take it in 2 chunks. Then I got what I thought was a dumb idea and put the 2" Wide Scan III in the scope on the chain (actually, I should realize there ARE no dumb ideas, Knisely has taught me that). Dang if we didn't see the entire chain (plus some other galaxies) in one field of view!!! Of course the really faint ones you couldn't see very well, if at all, but you could see the 12 brightest galaxies (including some not in the chain) and with effort some of the fainter ones. Seeing so many galaxies in one FOV was pretty awesome (Joey could pick out more than most of us, but then that's not unusual).

Oh, a 3rd minor highlight was near the end of the Star Party when a very young couple (well, any more ALL couples are very young to me) drove into the parking lot. John Lammers took a pair of binoculars with him to let them know what was going on and to show them the comet. SHE was interested and very thankful, politely chit-chatting with John.....HE was NOT amused :) Joey couldn't quite figure out our amusement...I'll talk to you later Joey....MUCH later.

Unfortunately by midnight the Dew had gotten unbearable and Steve and Lee packed up. By 12:30 PM we all pretty much had given up keeping stuff dry so the party ended, but it was a worthy night, enjoyable viewing, and good company. Hopefully we'll see more out there soon :)

Respectfully submitted,

Dave & Joey

NASA Spitzer Shares The Wealth

Like a philanthropist donating a prized collection to a museum, NASA's Spitzer Space Telescope has opened a virtual vault rich with scientific data. The Spitzer Science Archive now provides astronomers access to the infrared telescope's data well before the mission's one-year anniversary in space.

For members of the science community, it's as easy as going to the Spitzer home page at <http://www.spitzer.caltech.edu> and using a browser interface to download the data. To mark the debut of the archive, NASA is releasing two new dazzling Spitzer images. The public can view the Spitzer images at: <http://www.spitzer.caltech.edu/Media/mediaimages/data.shtml>.

The Spitzer Space Telescope (formerly the Space Infrared Telescope Facility) was launched on August 25, 2003. Its high-tech infrared eyes observe galaxies, infant stars and newly forming planetary systems that have escaped the view of other observatories.

"We are opening Spitzer's floodgates to the world," said Dr. Lisa Storrie-Lombardi, deputy manager of the Spitzer Science Center at the California Institute of Technology in Pasadena. "Any astronomer with Internet access has this information at his or her fingertips." The Spitzer Science Center is responsible for validating and processing the scientific data into a standard form that astronomers all over the world can use to further their studies.



This new Spitzer image of the spiral galaxy called NGC 300 readily distinguishes the galaxy's main star component (blue) from its dusty spiral arms (red).

"People can do scientific research by comparing observations made at different wavelengths using data from just the archives," said Spitzer Project Scientist Dr. Michael Werner of NASA's Jet Propulsion Laboratory, Pasadena, Calif. "The Spitzer archive will produce scientific surprises for decades long past the observatory's lifetime."

The archive includes data from the 110-hour "first-look" survey of the mid-infrared sky, and information from the Spitzer Legacy Science Program - a half dozen scientific investigations that can be used as the basis for future research.

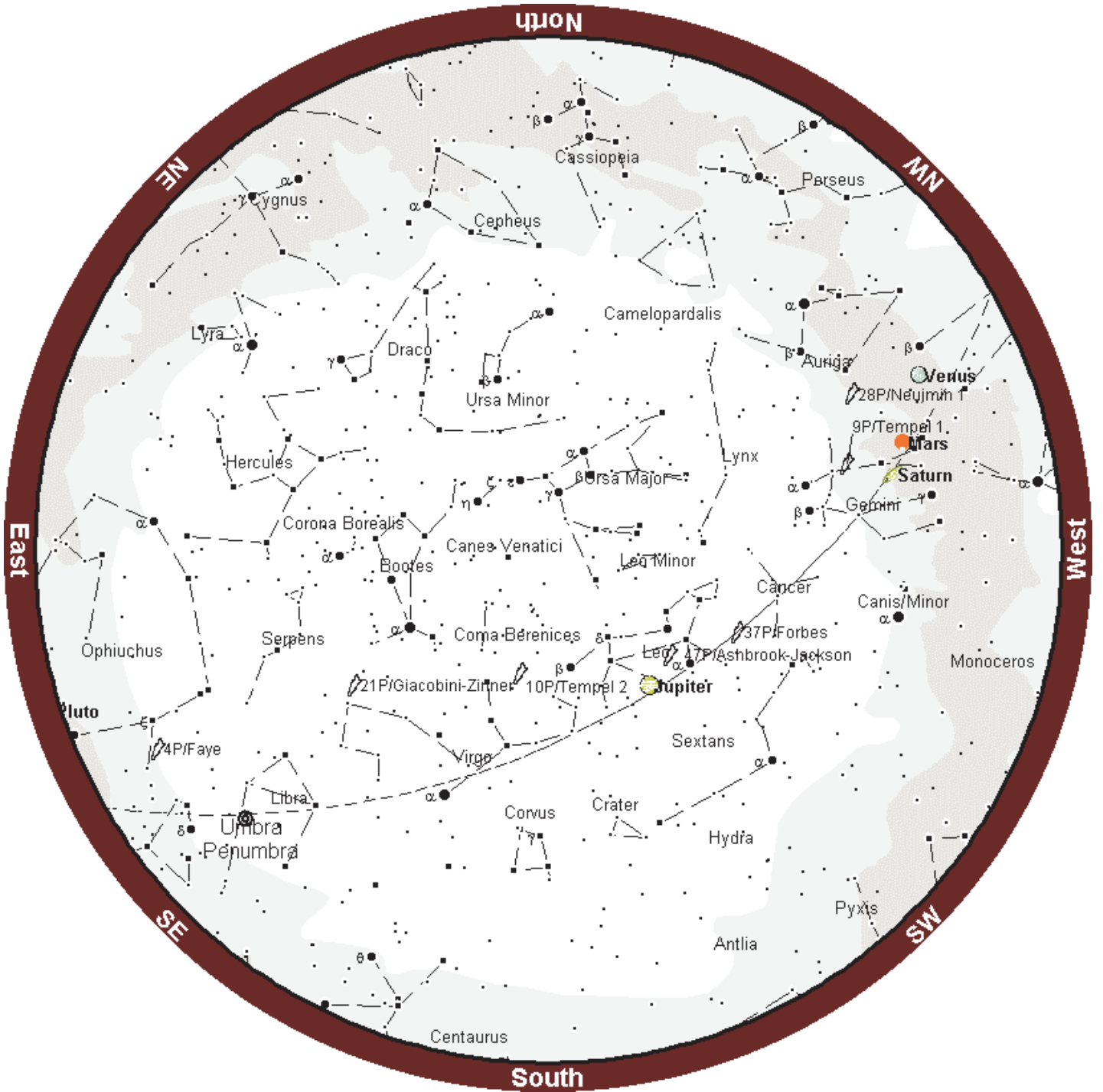
Spitzer is the fourth and final of NASA's Great Observatories; the others are the Hubble Space Telescope, Chandra X-Ray Observatory and Compton Gamma-Ray Observatory. Spitzer views space in the infrared, Hubble in the ultraviolet and optical, Chandra in the x-ray bands of light, and Compton in gamma

Snapshots from Astronomy Day 2004





May Star Chart



Events Calendar

| June 2004 | | | | | | |
|--|--|--|--|--|--|--|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | 1  | 2  | 3  | 4  | 5  |
| | | Sun: 17:56 - 08:51 | Sun: 17:56 - 08:52 | Sun: 17:56 - 08:53 | Sun: 17:55 - 08:53 | Sun: 17:55 - 08:54 Hyde Observatory open to the public |
| 6  | 7  | 8  | 9  | 10  | 11  | 12  |
| Sun: 17:55 - 08:55 | Sun: 17:55 - 08:55 | Sun: 17:54 - 08:56 | Sun: 17:54 - 08:56 | Sun: 17:54 - 08:57 | Sun: 17:54 - 08:57 | Sun: 17:54 - 08:58 Hyde Observatory open to the public |
| | | Venus transits Sun | | | Mahoney Star Party | |
| 13  | 14  | 15  | 16  | 17  | 18  | 19  |
| Sun: 17:54 - 08:58 | Sun: 17:54 - 08:59 | Sun: 17:54 - 08:59 | Sun: 17:54 - 09:00 | Sun: 17:54 - 09:00 | Sun: 17:54 - 09:00 | Sun: 17:55 - 09:00 Hyde Observatory open to the public |
| Earliest sunrise | | | | Earliest morning twilight | Club Star Party | |
| 20  | 21  | 22  | 23  | 24  | 25  | 26  |
| Sun: 17:55 - 09:01 | Sun: 17:55 - 09:01 | Sun: 17:55 - 09:01 | Sun: 17:56 - 09:01 | Sun: 17:56 - 09:01 | Sun: 17:56 - 09:01 | Sun: 17:57 - 09:02 Hyde Observatory open to the public |
| | | | | | | |
| 27  | 28  | 29  | 30  | | | |
| Sun: 17:57 - 09:02 | Sun: 17:57 - 09:02 | Sun: 17:58 - 09:01 | Sun: 17:58 - 09:01 | | | |
| | | PAC Meeting 7:30pm | Aldebaran 1.5 deg from Venus | | | |

Moon phase images by: António Cidadão

**Directions to Olive Creek
Observing Site**

Shorter:

Take Hwy 77 South out of Lincoln until you get to the Crete corner (junction Hwy 77 and Hwy 33). Go West on Hwy 33 (toward Crete) until you get to SW 72 St. Turn Left (South) on SW 72 St. and go about 5 miles until you get to SW Panama Rd. Turn right (West) until you get to SW 100 St. (SW 100 St does NOT go through to Hwy 33). Turn Left (South) on SW 100 St and go about 1 to 1 1/2 miles until you see the sign and entrance to Olive Creek (this is the West side of the Park). It's on your left (East) side of the road. More Black Top:

Take Hwy 77 South out of Lincoln until you get to the Crete corner (junction Hwy 77 and Hwy 33). Go West on Hwy 33 (toward Crete) until you get to about SW 114 St. - the first intersection after SW 100 St. (forgot to look at this street sign, sorry - you'll see a sign for Olive Creek though at this road- but don't count on anymore signs after that, I didn't see any). Turn Left (South) on SW 114 St and go about 5 miles or so until you get to SW Panama Rd (you'll see a church and small school on your right). Turn Left (East) and go about a mile to SW 100 St, then turn Right (South) and go 1 to 1 1/2 miles until you see the Olive Creek entrance and sign (on your left hand side of the road).

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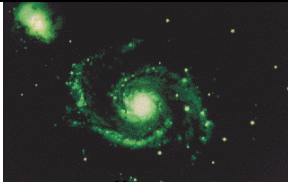
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First Class Mail

**Next PAC Meeting
May 25, 2004
7:30 PM
Hyde Observatory**